The Sydney ornithological fraternity, 1930s–1950: anecdotes of an admirer

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(Allen Keast, now Professor emeritus from Queen's University, Kingston, Canada, is an internationally recognized ornithologist. An early part of his experience was as a member of the Royal Zoological Society of New South Wales. It is fitting that this oral history of his early years is published in the Society's journal. Ed.)

The centre of Sydney ornithology 50 years ago was the Ornithological section of the Royal Zoological Society that met monthly (originally on Friday, then Thursday, nights) jointly with the New South Wales Section of the Royal Australasian Ornithologists' Union. The meeting place was the 6th floor of Bull's Chambers, 28 Martin Place. We were the most active of the half a dozen Sections, that included Aviculture, Conchology, Entomology, etc. The meeting room was graced by a magnificent set of Neville Cayley paintings: these are now housed at Taronga Zoo.

I became a member of the Society at the age of 16 after attending an evening lecture at the Australian Museum by Keith Hindwood: I subsequently wrote him and he invited me to join. What I experienced at my first meeting would set any teenage bird enthusiast agog. The Chairman was the distinguished bird artist Neville W. Cayley. The 40 members present represented the cream of Sydney's ornithological galaxy: Alex Chisholm, Michael Sharland, Tom Iredale, Keith Hindwood, Dom Serventy, Perc Gilbert. Gilbert captivated us with his account of continuing weekend studies of the little-known Topknot Pigeon at Bola Creek, Royal National Park, and fielded questions on his Blue Mountains to coast bird migration findings (Gilbert 1935, 1936). Keith exhibited a series of early Watling bird prints. Dom reported on derelict seabirds recently washed up on Cronulla beach. Tom regaled the audience with witty anecdotes on ornithology at the British Museum. I am not sure if I took out a Life Membership to the Society that first evening or not, but I am sure it was soon after!.

At the end of the meeting we retired to a nearby coffee shop. Here, and at subsequent such gatherings, ardent photographers Norman Chaffer, Roy Cooper, Jack Waterhouse, and others, exhibited bird photographs taken since the last meeting. Admiration would be unlimited; many bird species were then being taken for the first time. There would be discussions of bird observations, joint trips would be planned: the talk would be about birds and nothing else. The Sydney ornithological fraternity was smaller 50 years ago, the city was compact and travel around it easier; interchanges of home visits were frequent.

My ornithological career was to be inspired and shaped by this late 1930s–1940s ornithological fraternity. Knowledge was freely dispensed and I absorbed it all. Keith Hindwood's city office was always available for visiting — I do not know how he ever got any work done — and I did not hesitate to call frequently on Roy Kinghorn and Tom Iredale at the Australian Museum. Michael Sharland, on learning of my wishing to become a bird photographer searched the second-hand shops for a quarter-plate double-extension camera, bought it on approval for £5.10.0, tested it, and handed it over to me. I was "hooked" on bird photography. Such kindness was general: I cannot speak too highly of it in my case.

I have long since forgotten details of the many and diverse lectures at the monthly Society meetings. They covered the widest range of subjects: sea-birds, birds-of-paradise, breeding seasons, the structure of bird feathers, photographic field trips. A memorable feature was a 20 minute "discussion" and "observations" period at the end of the meeting when many subjects of interest were explored. Leg-pulling was rampant at this time. Three examples are still vivid in my memory.

A visiting American ornithologist, Professor John Hough of the University of Colorado, recounted with delight how he had encountered an Emu in Central Australia. "How do you know it was an Emu" Alex Chisholm demanded to know. "From the way it flew" countered Hough. This confirmed to Alex that John merited being made into a friend. On another occasion Jock Marshall (later to be Professor Marshall of Monash University) wrote to the Section announcing that he had seen an Eastern Bristlebird in the mountains behind Kiama. No Bristlebird had then been seen for 40 years. Tom Iredale jumped to his feet and announced that *he* saw them all the time: they were coloured red, white, and blue, and whistled "Waltzing Matilda". Needless to say Marshall obviously *had* seen a Bristlebird . . . the Barren Grounds are now a Bristlebird reserve.

But Johnno Rhodes delivered the ultimate in bizarre "put-downs". Johnno had always been an unlikely contender in the "elegant" member stakes. He would today be referred to as a rugged country boy. He and his friend Ernie Woods hailed from the famous birding Doonside area and he knew more about bird nesting than the rest of us put together. He had been a side-show boxer in his youth, played First Grade Rugby League for Newtown, and professionally belonged to the wharf labourer fraternity, a group not admired for their respect for authority. From these diversions Johnno had acquired a cauliflower ear, a certain gnarled appearance, a tenderness to ornithologists, and an advanced sense of humour. In his youth Johnno had been an egg-collector, an evil habit that it was rumoured he had never completely shaken. On the basis of his skill at nest-finding more than one eminent Sydney bird photographer, looking over his shoulder to make sure nobody was watching, asked Johnno where he might find the nest of a so-and-so to photograph. Thus challenged Johnno more than once went out and found one for him. But back to the relevant incident. In the 1940s the Cumberland Plain supported a high density of Paperbarks (Melaleuca) with the mistletoe *Ayema gaudichaudi* and, when these fruited annually in January-February, of breeding Mistletoebirds. One February meeting Johnno announced that this was a good year for Mistletoebirds and that he had found 30 nests. None of us had ever seen a Mistletoebird nest, they were hard to find; and Johnno's announcement brought the house down. The following month Johnno arrived with two hessian sacks. He stood up and said "You didn't believe I could find Mistletoebird nests . . . here!" With the flip of a wrist he upended the sacks over the table and startled the Chairman who was temporarily lost in a sea of Mistletoebird nests. Rhodes had spent the previous weeks finding every derelict Mistletoebird nest he could. From memory there were 44. Thereafter Johnno was taken seriously. (Needless to say the wonderful Cumberland Plain Mistletoebird habitat has long since been given over to housing!).

The Section's ornithological lore was also dispensed at the meetings. I was assured that the suburb "Crow's Nest" got its name when a Raven condescended to grace the first telegraph pole with a nest. I learnt how Sydney's only specimen of the Forest Kingfisher came to be. In the 1920s "D'Ombrain", I have always assumed it was the distinguished ornithologist Dr E. A. D'Ombrain, sighted the bird on telegraph wires from a tram in Willoughby Road, Chatswood. He leapt out, produced a catapult, shot the bird, and ran after the tram yelling for the driver to stop and let him back on. I have often wondered if every forward-looking ornithologist carried a catapult in the 1920s. On a more sober note I learnt the story of how, I think it was in 1933, Keith Hindwood had led home the New South Wales delegates from the R.A.O.U. camp-out at Mallacoota after George Mack, then ornithologist at the National Museum, Victoria, had collected a Scarlet Robin near the camp. Back in Sydney the press picked up the story and it eventually led to enforcement of regulations against egg-collecting that had been in place since about 1919 and never really enforced. Years later, after I joined the staff of the Museum I was to catch up with some of the illegal collections of eggs confiscated at that time.

One-day Saturday, or Sunday, field excursions were part of the activities of the Ornithological Section. In those days few people had cars and we travelled by train or boat. An interesting weekend excursion was organized by Michael Sharland in the early October weekend to the then National Park Trust cabin at Gundamain. On the ferry trip downstream from Audley many of us saw Mangrove Herons for the first time. The heathland around Gundamain was abloom. Brown Thornbills were common and several nests with newly laid eggs were found.

An outstanding excursion was the regular annual one by boat to Lion Island at the mouth of the Hawkesbury. We travelled with Keith Hindwood's in-laws, the Goddards, who at this time operated the passenger ferry around Pittwater. The short journey from Palm Beach to the Island, landing on the sandy beach on the lee side of the island, and soon being greeted by the Fairy Penguins of the rocky shore and Wedge-tailed Shearwaters of the top of the island, were delights. On one of these trips we found the New Zealand Sooty Shearwater breeding, the first authenticated record for the New South Wales coast (Keast and McGill 1948, *Emu* **47:** 199–202).

Enthusiasm generated on the Lion Island trips led to my greatest island experience, a trip to the legendary Five Islands off Port Kembla. These were recognized as being the best seabird breeding islands on the New South Wales coast: they are isolated, small, rocky, sea-swept, and the outer ones present formidable landing difficulties. They were known as the breeding place of the White-faced Storm Petrel, Wedge-tailed Shearwater, Fairy Penguin, Crested Tern and Silver Gull (the now-nesting Pelicans are newcomers of later years). To visit them is most ornithologists' dream. One Saturday, soon after I joined the Society there was a knock on my door and a Professor Consett Davis introduced himself, saying that he had heard from Iredale that I would like to go to the Five Islands, that he was studying the plant ecology of the Five Islands, and asked if I would like to join their next trip. My excitement knew no bounds; I was incredulous, Davis was based in Armidale. From Consett (who was eventually killed in New Guinea during the War) I started to learn how professional biologists thought, worked, researched. Meeting him was the next step in my evolution: I decided that at all costs I had to become a biologist. Later I was to organize my own trips to the Five Islands, with Norm Chaffer, Roy Cooper, Alan Tubb, and others being my companions, and was able to produce an updated documentation on the birds of the islands (Keast 1943, *Emu* **42:** 133–40).

The society's national park cabin on Waterfall Creek

Singly, the Society's most delightful feature, and factor in social cohesion, was the Zoologists' Cabin in the Royal National Park. Nestling deep in a shaded valley floor on Waterfall Creek, a kilometre below the waterfall and about four km from the Waterfall railway station, it was situated on the creek bank with lush temperate rainforest on the one side and tall eucalypt forest on the other. For much of the year, the air was filled with the calls of lyrebirds, catbirds, bowerbirds, Yellow Robins and Lewin's Honeyeater, and the gurgling of the creek's water.

Here, and on nearby creeks like Bola and Palona, rich underlying chocolate-brown Narrabeen Shales supported the only stands of temperate rainforest in the Sydney area. The dense growth of coachwood and lilly-pilly created a closed canopy, and lichen and moss-covered trunks and branches supported many small aerial orchids and other epiphytes. The forest floor on either side of the creek was covered with rotting trunk and leaf mould that generated abundant food for Lyrebirds and Yellow-throated Scrub-wrens. In winter the loam and steep hillsides would be covered with Lyrebird scratchings. Usually two, and occasionally three, males could be heard singing simultaneously. The football-sized Lyrebird nests were located in the sandstone cliffs, on a steep slope, or balanced on the top of a tree-fern. From October onwards the Yellow-throated Scrub-wrens suspended their bulky nests, fashioned to resemble debris from the last flood, over the creek-bed. In summer migrant Rufous Fantails and Black-faced Monarchs were common breeders.

Year-round the tall Blackbutt-dominated eucalypt forest along the track down to the Cabin supported a full spectrum of eucalypt forest birds: treecreepers, thornbills, honeyeaters, scrub-wrens, fantails, and cuckoos. Satin Bowerbirds had their bowers along the entrance track. A few yards downstream, where Waterfall Creek joined the Hacking River to form wide pools, Azure Kingfishers fed and nested. The Rock Warbler was common along the sandstone ridges of the adjacent hilltops: from here also the loud strident songs of the Cicadabird rang in mid-summer.

The Cabin came into the hands of the Royal Zoological Society in the late 1920s as part of the successful outcome of a campaign to end logging in the Park. It had formerly housed the timber workers. Nearby was a small sawmill whose rusty engine can still be seen. The remains of the wide creek bottom and hillside tracks along which the bullocks once pulled the fallen logs, and remains of old log bridges, were still visible in those days.

When I first visited the Cabin in the late 1930s it had already had a distinguished career as a bird study site. Jock Marshall's remarkable studies of Satin Bowerbirds, and studies on the Yellow-throated Scrub-wren, Rufous Fantail, and Topknot Pigeon by Chaffer, Marshall, and Gilbert (references in accompanying paper) had been carried out here. In those days the Cabin was booked virtually every weekend by the naturalist community, for bird-watching, photography, and documenting lyrebird activity. We would walk down from the Station on Friday nights (few people then had cars). Boobook Owls would be heard constantly; the odd Greater Glider seen in the tall trees of the valley floor; on arrival at the Cabin the resident Brushtail Possum would greet us. For us it was a quick cup of tea and bed. An early morning breakfast, cooked outdoors, would be accompanied by visiting Yellow Robins, Red-browed Finches, bowerbirds, the Green Catbird, occasionally by a Pied Currawong and, periodically, a Lyrebird would stride past to investigate the excitement.

The end of the Cabin came ignominiously about 1944 when most members of the Society were absent at the war: it was pilfered bit-by-bit for seaside cottages on the adjacent Park beaches. Today the old hearthstone is all that remains. But the huge gnarled old turpentine tree that towered above the Cabin, and whose hollow branches and trunk have housed many generations of possums, still remains. Even the severe January 1994 bushfires dared not touch it.

The great Sydney ornithologists of 50 years ago

The high standards of the Zoological Society bird meetings were memorable; as every schoolteacher knows, if a group contains a couple of outstanding participants, it elevates the status of the whole. This was the case here.

Personal profiles of the leading dozen Sydney ornithologists of the time are documented in obituaries in *The Emu,* and elsewhere. What is of interest here is how their personalities compared and how they accordingly interacted to produce such an enjoyable group. My memories are as follows. Neville Cayley was of medium stature, round-faced, bespectacled, jovial, highly enthusiastic, and though completely an artist he had a very broad knowledge and love of birds. He handled museum skins he was going to paint with the tenderness reserved for works of art. His enthusiasm meant that he was vulnerable to the dirty tricks of the taxidermists at the Austrialian Museum who would manufacture a skin from bits of other skins and drop the creation into a group of birds he was borrowing. I think on one occasion Neville was half-way into describing a new species before he found out the truth. I did not like that, birds were sacred to me too.

Tom Iredale, Curator of Molluscs at the Museum (he had to take this post because no job was available in birds) was an Englishman who had come to the Antipodes at the age of about 15 with a death-from-consumption threat hanging over him. The climate (of New Zealand) cured him and he went on to work closely with Dr W. R. B. Oliver, the great New Zealand ornithologist and to undertake an expedition to the Kermadecs. Back in Britain he was research associate to Gregory Mathews and played a fundamental role in the writing of the Mathews volumes. He was a true internationalist with a fundamental background of knowledge that was remarkable: his conversation was loaded with anecdotes about ornithology at the British Museum, taxonomists and taxonomy, naming of birds, history of ornithology, and sea-birds. I found every minute with him an inspiration. His wit added to the joy of the bird meetings.

Alex Chisholm had a touch of the old Scot to him, was widely read, and an expert on Australiana — besides Australian birds. He certainly enlivened ornithological evenings with his historical interludes and interpretations — and knowledge of bush lore and bird habits. Chisholm acquired some of the latter when he ran a nature column in the newspaper: his correspondence with bushmen comes through in his "folksy" books *Mateship in Birds,* and *Birds and Green Places.* Later Alex became Editor of the Sydney *Daily Telegraph* and *The Australian Encyclopedia.* Today his papers on John Gould and book on the Leichhardt Expedition are legends.

Keith Hindwood was the great expert on the birds of Sydney, had read everthing ever written (and, I am sure, spoken in private conversation) about them. He maintained a formidible card catalogue on which every record was inserted: and in conversation could immediately recall every record. He was for a long time Honorary Ornithologist to the Australian Museum. Keith was an indefatigable field worker and developed and published monographs on the Mangrove Bittern, Leaden Flycatcher, and Rockwarbler, as well as syntheses on the waders and honeyeaters of Sydney, and other topics. He was the "final court of appeal" on every subject at the meetings. He was the ultimate gentleman and enthusiast.

Michael Sharland was probably the best-loved and gracious of the members. He had a detailed appreciation of everything ornithological, organized field outings and discussions and, as a member of the staff of the *Sydney Morning Herald* was able to publicize conservation measures. It was our loss when he left Sydney to become Director of National Parks in Tasmania: there he did much to establish the present Parks system.

Arnold McGill did not come along until the early 1940s. With his endless reading he was soon to become the most knowledgeable of ornithologists, and even Alex Chisholm eventually found himself consulting Arnold on all sorts of matters. He had a wide range of international bird books and, given the name of a foreign species, could immediately state where it occurred. Dr Tom Gilliard of the American Museum of Natural History once remarked to me that if Arnold had lived in the USA he would long since have been given an Honorary Doctorate. Arnold was to become perhaps the most prominent Sydney ornithologist of the 1960s and 1970s and was made a Patron both of the Sydney and Cumberland clubs.

Norman Chaffer was undeniably the greatest bird photographer Australia has ever produced. He started off in the 1920s at the same time as Michael Sharland and, in fact, they met in the field when out photographing . . . it must have been a chance in ten million because there could not then have been more than half a dozen bird photographers in the whole of Australia. He pioneered black-and-white, then colour, then the use of flashlight photography. He published a book on bowerbirds. Norman was one of the most obliging people you could meet, and a staunch conservationist. His annual film nights at the bird meetings were sell-outs.

Dom Serventy was a professionally trained biologist with a Cambridge Ph.D. He had been an ornithologist since childhood. He initiated beach surveys for derelict seabirds that were continued for many years. A distinguished authority on sea birds and on the birds of Western Australia, he published extensively both in books and scientific journals. He built up the Western Australian Naturalist eventually to be easily the best publication of its kind in Australia. Dom was one of my "Gods" and was eventually to do more to encourage me in ornithology than anybody else. At the meetings his lively arguments with Tom Iredale over some point of nomenclature or seabird lore were memorable.

Far from being narrowly "professional" it should be stressed that the club also contained other personalities. Much revered was J. E. (Ted) Roberts, a stately elderly gentleman in his 70s who was the long-term Secretary of the New South Wales Gould League of Bird Lovers, that formed a powerful conservation lobby through the schools. Ted saw to it that some of the leading ornithologists did their civic duty by persuading them to judge school bird song competitions.

Jim Palmer was a rabid conservationist, bushy-haired, and spoke with an intensity that would make a Communist Party organizer blanch. In these earlier days when the conservation movement was weak, Jim was forever attacking some State Minister or local Council on some issue; it was the Section's role to endorse these submissions. Unexpectedly some significant successes were achieved. By way of balance but equally prominent was a gracious schoolteacher, Elizabeth Butters. She had one objective at the meetings, to persuade the "experts" to take "the lesser fry" out into the bush and teach the latter group (to which she claimed membership) how to identify birds. Mostly her entreaties fell on deaf ears. But early in 1940 we organized a major Sunday excursion into the coastal heathlands at Marley, Royal National Park. Elizabeth surged to the lead of the party. Every time a bird appeared she virtually danced with excitement. "What's that?" she would demand to know. "That's a New Holland Honeyeater" we replied. And, five minutes later, "What's that?". Reply: "That's a New Holland Honeyeater". Half an hour later another bird peered from an adjacent banksia . . . "and that?". "Er, er, er, that is also a New Holland Honeyeater". I fear Elizabeth was shortsighted. But after that, I confess, I was a little less critical of Keith Hindwood and Norm Chaffer for not having done the right thing and taught Ms Butters to identify birds.

Although they were not then active members of the Section, brief mention should be made here of Jock Marshall and Sydney William Jackson. In the late 1930s after being very prominent, Jock was occupied with a University Bachelor of Science degree, under the extremely difficult circumstances of attending the University by day (the time the course was available), and earning money as a journalist at night. Jock lost an arm in a shooting accident when he was 12 years old, collecting a bird it was said. Dynamic, forthright, somewhat intolerant, with a vast knowledge of birds in the field, Jock continued to publish widely. As his University exposure increased his interests became increasingly scientific and theoretical. He maintained a close contact with Sydney ornithologists and his name came up constantly. He was a member of the Oxford University expedition to the New Hebrides, under John R. Baker: one of its major objectives was the study of breeding seasons in the tropics. Jock spent much of his professional life in the study of reproductive physiology. Post-war he went to Oxford for a Ph.D., headed the Zoology Department at St Bartholomew's Medical College in London, finishing his career as Departmental head at Monash University in Melbourne. His researches on bowerbirds and avian reproduction was to do much for the image of Australian ornithology internationally.

Sydney William Jackson, the great egg-collector and oologist of earlier decades, the expert on the birds of the northern rivers of New South Wales, and Curator of the H. L. White Ornithological Collections at Scone, was one of the legends of Australian ornithology; he was an old man but somewhat of a recluse by the 1940s. He never attended meetings but Keith Hindwood quoted his early writings in *The Emu* constantly. Fables about him were still commonplace. When visiting the Tweed River in 1942 I used this as an excuse to visit and meet Jackson who at this time was allowed use of a small office in Jack Ramsay's photographic studio in George Street North. I wanted to get his advice on seeing little-known birds like the Sooty Owl. Jackson proved to be a stocky, somewhat short-legged and short-armed man (to this mean and nasty youth the concept of a barrel came to mind); he was tremendously powerful in physique. (There are many photographs of him scaling giant forest trees by rope ladder.) Being able to discuss the old rainforests of the Richmond and Clarence Rivers with the old master was a delight: he could not have been friendlier, more interested, and helpful. He described and mimicked the major songs of the Sooty Owl for me. From him I learnt a basic lesson about many old egg collectors; their unique knowledge of some of the subtleties of bird behaviour. It took me years to learn that state of nesting in many bird species can be precisely determined from calls used.

Australian Museum ornithology in the old days

The Australian Museum was the ultimate home of Sydney "professional" ornithology: here resided the big specimen collections, and many of the unique early collections of A. J. North and others. Here would be delivered "road kills" and dead birds picked up by out-of-town residents. Weekly the Honorary Ornithologist, Keith Hindwood, would visit the taxidermy section to inspect and identify these. Here lay the specimens that Neville Cayley used in his paintings.

As a boy I visited the galleries of the Museum frequently. I was befriended by the then Ornithologist, Roy Kinghorn, who eventually had much to do with my getting on the staff, and Tom Iredale. I eventually joined the Museum staff in 1948, for the first years working only in University vacations. My initial role was to clear up a backlog of specimens that needed registering. I immediately "tripped over" boxes and cartons of birds' eggs, the ones that had been confiscated from the unlicensed egg-collectors in the 1930s. They had been languishing in the Museum archives ever since . . . the reason being that, when the Police and a reluctant Roy Kinghorn had raided the homes, several owners refused to surrender their data catalogues. The eggs, hence, remained unidentified and without data were of no scientific value. I was absolutely horrified at the spectacle of unopened boxes. At the risk of seeming sentimental as I opened the containers I could not help thinking of each prettily spotted clutch as some small bird's triumph of creation and, alternatively, of the anguish of the collectors whose polished cedar cabinets were opened and the contents unceremoniously taken away. I was loud in my protests to the museum heads that surely there must be a real use for them, but they already had magnificent collections of properly labelled material. When I joined the staff full-time a couple of years later the unwanted collections were no longer there. New South Wales handled the illegal collecting problem badly: in Victoria, by contrast, they controlled collecting by issuing licences to esteemed collectors on the basis of the latter providing annual returns on eggs taken and willing their collections to the National Museum. Norman Favaloro was one such person.

My next task at the Museum was to catalogue a collection of British Columbia birds donated by the Scottish philanthropist Wilfred Plowden-Wardlaw. They had been donated a couple of years previously but because of shortage of staff remained in their original boxes. On a return visit Wilfred discovered this, and the matter got into the press.

Wardlaw was the protégé of Tom Iredale and Gilbert Whitley who had befriended him when he came to Sydney. Impressed by their enthusiasm he offered to have some overseas collections made for the Museum. This collection had been the result. Later I got to know Plowden-Wardlaw. He was a most original unusual and delightful person. In the way of exchanging confidences that only ornithologists do he claimed to be the shining light of a conservative Scottish Catholic family but there had been a diverging of priorities, as a result of which he had been condemned forever after to travel the world, on a very lucrative expense account, as the agent for the family business (Tennants Beer comes to mind, if there is such a company!), drinking beer with the leaders of countries and studying birds. He had entered the new career with delight: drinking beer with important people from Canada to the West Indies, South Africa, New Zealand, and Australia — but most of the time studying birds — was no hardship. Later he assembled a small collection of 30–40 New Zealand birds for the Royal Scottish Museum — most of them old skins purchased from private collections. The war intervened and he could no longer send them to Britain, so they came to the Australian Museum. They apparently departed from New Zealand under a cloud, without an export permit. Wilfred painted for me a glowing final scenario of half a dozen fussy little New Zealand gunboats valiantly trying to intercept the departing freighter. At any event the Australian Museum got the birds, and the furore died down.

Later Wilfred offered to assemble a collection of West Indian birds for the Australian Museum. The response he got apparently, which infuriated Tom Iredale and myself when we later heard about it was: "For Heaven's sake do not inflict any more foreign specimens on us". In fairness, storage space *was* very limited in those days but it would have been nice to have a collection of West Indian birds in Australia.

Subsequently I met Wilfred in Vancouver. He was as elegant and enthusiastic as ever. But he had dropped the name "Plowden-Wardlaw" and was now "The Campbell of Craigie".

The 1950s was the beginning of a new era at the Australian Museum with the appointment of Dr John Evans as Director. I was given the task of modernising the museum's bird display galleries . . . which consists of endless cases filled with multiple specimens of each species, each individual desperately trying to come up with a different posture. I supplied an overall plan and a design outline for each case; the Head of the Art Department John Beeman created the layout; thereafter the plan was for me to work closely with the taxidermists as the work proceeded. There must have been some difference in work styles: at the end of the year Christmas party, when everybody was given a funny present mine was of the box-within-box-within-box variety. In the smallest box in the centre was a length of rope. But we eventually completed the installations even though we had to use the old cases with small panes of glass separated by numerous strip partitions. To read a label one had to crane one's neck around these. To this day the ornithologists who developed in the 1950s and 1960s can be recognized by their wrynecks.

(Allen Keast is a life member of the Royal Zoological Society of New South Wales. The Ornithological Section of the RZS has ceased to exist but the RAOU is still flourishing. Ed.)

BOOK REVIEWS — BOOK REVIEWS

"Amphibian Biology. Vol. 1, The Integument"
ed. by H. Heatwole and G. T. Barthalmus
Surrey Beatty & Sons, Chipping Norton, 1994.
418 pp. ISBN 0 949324 54 X (v.1). RRP $115.00.

When Hal Heatwole first talked to me about collaborating with a couple of chapters in a planned series of volumes on the Amphibia, and co-editing one of them, I listened to his enthusiasm and saw his obvious excitement. But I wondered whether such a grandiose scheme would ever see the light of day; it all seemed to be too ambitious to become a reality. Now, with the publication of the first volume in the series, I can appreciate Hal's vision as achievable, and a highly significant milestone in herpetological literature.

Seventeen contributors have been involved in producing what are thorough reviews of their specialities. The pitch is, as Heatwole explains in a Preface to the series, comparable to the series "Biology of the Reptilia" edited by Carl Gans.

The volume is dedicated to Dr Vittoria Erspamer, the doyen of natural product pharmacology. Erspamer contributed a massive chapter on bioactive secretion of skin glands: a complete overview of the state of knowledge of this complex topic, with emphasis on his current work on the opioids, which are by far the most powerful analgesics known to medical science.

As a fascinating companion to Erspamer's contribution, Barthalmus examines the biological roles of amphibian secretions — just what the secretions mean to the animals themselves, and shifting the emphasis from the widely assumed role of toxins. He points out that little is known of just why some species have dozens of peptides, and suggests a collective benefit; a synergistic purpose, strongly supported by some of the observations of Dr Michael Zasloff, who demonstrated remarkable potentiation of antibiotic activity of magainins when peptides were applied in combinations.

Appropriately, the structure of the integument is reviewed by Fox and accompanied by some of the most skilful half-tone artwork. From that overview, Warburg, Lewinson and Rosenberg document the